REMARKS

Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of September 13, 2004. All of the Examiner's objections and rejections are traversed. Reexamination and reconsideration are respectfully requested.

The Office Action

Claim 10 has been objected to because of a minor informality.

Claims 1-15 stand rejected under 35 U.S.C. §102(e) as being anticipated by Schaumont, et al. (U.S. Patent No. 6,606,588, hereinafter referred to as Schaumont).

Amendments to the Claims

Claim 10 has been amended to correct a typographical error as noted in the objection thereto. According, it is respectfully requested that the objection now be withdrawn.

Comments/Arguments

Schaumont is directed to a design apparatus and method for generating digital systems. Schaumont refers to his invention as OCAPI, which is "a C++ library intended for the design of digital systems." Column 8, lines 7 and 8. According to OCAPI, the design flow starts off with a C++ description of the system being designed. The system is described as a network of components communicating with one another. See column 8, lines 20-26, referring to FIGURE 1D. "At first, the design is refined, and in each component, features expressing hardware implementations are introduced ... ." Column 8, lines 27-29. FIGURE 1C shows, from a high level point of view, what an OCAPI design flow looks like. "The initial specification is an architecture model, constructed in C++." Column 69, lines 33 and 34.

Unlike the present application, the design approach of Schaumont begins with a C++ description of the system's components and/or architecture expressed in terms of hardware implementations. In contrast, the present application is directed a design language and/or protocol that, as opposed to starting with, generates or outputs a C-based code description of an optimized state machine for implementing the hardware under design. That is to say, in a sense, what Schaumont begins with, is what the present application produces. The output C-based code of the present application

results from the compilation of an input source code which uses a context-free grammar to describe a job the hardware being designed has to do rather than describing an implementation of the hardware. Schaumont teaches exactly the opposite, i.e., Schaumont teaches beginning with a description that is expressed in terms of hardware implementations. For example, Schaumont's design process beings at box **112** of the application's FIGURE 1, while the application's design process involves compiling (step **110**) a source program file **102** to generate the output code or file **112**.

In particular, claim 1 recites "entering source code into a source code file, said source code using a context-free grammar that describes a job the hardware being designed has to do rather than describing an implementation of the hardware" and "compiling the source code file to generate an output file which describes an optimized state machine for implementing the hardware, said output file being written in a C-based code." Schaumont teaches no such source code. Rather, Schaumont's input or beginning design description more closely corresponds to the claimed out.

Claim 6 recites "a compiler which generates from source code an output file that describes an optimized state machine for implementing hardware, said source code using a context-free grammar that describes a job that the hardware being designed has to do, and said output file being written in a C-based language." Schaumont teaches no compiler having such an input source code. At best, Schaumont teaches a design process that begins with such a compiler's output file.

Claim 10 recites "a computer having means for entering an input file written in a source code, said source code using a context-free grammar which describes a job that hardware being designed has to do" and "a compiler which runs on the computer, said compiler selectively converting the input file into an output file which is written in a C-based code, said output file describing an optimized state machine for implementing the hardware being designed." Schaumont teaches no such input file written in the claimed source code, nor does it teach a compiler which takes such a input file and coverts it into the claimed output file. The design process of Schaumont merely begins with a C-based description of hardware implementations.

Accordingly, it is submitted that claims 1, 6 and 10 define patentably over the art, along with claims 2-5, 7-9 and 11-15 that depend respectively therefrom.

Furthermore, as to claims 2, 7 and 13, Schaumont fails to teach that both a transmit and receive state machine can be generated from the same input source code. With respect to "EXAMPLE 4" of Schaumont, Schaumont discloses the design of a

QAM Transmission System with OCAPI. The QAM system includes both a transmitter and a receiver. See column 68, lines 50+. The C++ code for the QAM system begins at column 73. The listed code includes code for the transmitter, i.e., "3 Transmitter Code" (starting in column 73) and separate code for the receiver, i.e., "6 Receiver Code" (starting in column 121). This implies that OCAPI is not capable of generating both transmit and receive state machines from the same source code, otherwise why would there be a need for the separate design codes for the transmitter and receiver. Accordingly, claims 2, 7 and 13 further define patentably over the art.

CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to telephone the below signed, at (216) 861-5582.

Respectfully submitted,

FAY, SHARPE, FAGAN,
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March 14, 2005
Date

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Certificate of Mailing

Under 37 C.F.R. § 1.8, I certify that this Amendment is being

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